

FINDING OF NO SIGNIFICANT IMPACT/ DECISION RECORD

Blackwell Playa Salt Cedar Control Project

EA No. NM-060-2003-008

FINDING OF NO SIGNIFICANT IMPACT: Based on the analysis of potential environmental impacts contained in the attached environmental assessment, I have determined the proposed action is not expected to have significant impacts on the environment and that preparation of an Environmental Impact Statement is not warranted.

DECISION: It is my decision to authorize the extrication and subsequent herbicide treatment of salt cedar to improve the ecological condition of the grassland community on a portion of Allotment 64058. A total of 100 acres of public and private land infested with salt cedar will be treated as part of this project. In addition, authorization is extended to subsequent prescribed fire treatments within the project area to include spot treatments and large scale burns. Location of the project is as follows (refer to the map in the Environmental Assessment):

T. 10 S., R. 25 E.
Portions of Section 20

Actual salt cedar mechanical removal will be done by BLM contract. Herbicide treatments and prescribed fire will be conducted by the BLM. The surface protection procedures set forth in the proposed action have been incorporated into the Environmental Assessment. Any comments made to this proposed action were considered and addressed.

Rationale for Recommendations: The decision to authorize the proposed action does not result in any undue or unnecessary environmental degradation. The action is consistent with planned actions presented in the Roswell Resource Management Plan and Record of Decision, October 1997.

In accordance with 43 Code of Federal Regulations, Part 4100, Sec 4160.2 any applicant, permittee, lessee or other affected interests may protest this proposed decision in person or in writing to the authorized officer, within 15 days after receipt of this decision. Please be specific in your points of protest. In the absence of a protest, this proposed decision will become the final decision without further notice. Any person who is adversely affected by a final decision of the authorized officer may file a written appeal to the Final Decision for the purpose of a hearing before an administrative law judge under 43 CFR 4.470. A period of 30 days after the decision becomes final is provided in which to file an appeal and a petition for stay of the decision in this office (43 CFR §4160.3 [c] and §4160.4).

/s/ T R Kreager _____
T. R. Kreager
Assistant Field Office Manager - Resources

11/14/02 _____
Date

Environmental Analysis
Blackwell Playa Salt Cedar Control Project
NM-060-2003-008

Location:

Township 10 South, Range 25 East
Portions of Section 20

October 10, 2002

Bureau of Land Management
Roswell Field Office
Roswell, New Mexico

I. INTRODUCTION

A. General Information

The area of analysis is located entirely in Chaves County about 6 miles east of Roswell via Highway 380, Red Bridge and Zinnia Road. Public land in the general area are scattered isolated tracts, primarily in grassland habitat. The specific project area is adjacent to and west of the Bitter Lake National Wildlife Refuge (BLNWR). The proposed project is on the Blackwell BLM grazing allotment sharing a common boundary with BLNWR. Public land consists of one tract of land about 200 acres in size. Historical and present use of the subject lands have been limited to livestock grazing and limited energy development.

This project is planned for completion in Fiscal Year 2003 with the Clean Water Action Plan Funds obligated in Fiscal Year 2002.

B. Need For the Proposed Action

The need for the proposed action is to improve range and watershed conditions on the Blackwell Allotment 64058 by reducing the amount of salt cedar growing in a small playa and associated drainage within a grassland community type. Salt cedar has increased to the extent that it has taken over much of the surface area within the playa and upstream drainage that supplies the playa with most of the overland flow from precipitation. There is the potential for salt cedar to proliferate throughout more of the grassland community and control is needed to remove salt cedar from the playa and associated drainage before it becomes more dense and more expensive to control. Clearing salt cedar would allow for the development of open water habitat within the playa and would contribute to the availability of groundwater resources in the long term, and would enhance groundwater supplied to the aquifer which supplies critical aquatic habitat for several wildlife species found at BLNWR.

C. Conformance with Land Use Plans: The proposed activity is addressed as part of the Roswell Resource Management Plan (October 1997).

D. Relationship to Statutes, Regulations, or Other Plans: The control of salt cedar as a range improvement, either under Cooperative Agreement or Range Improvement Application, is addressed under the 43 Code of Federal Regulations, Parts 4100, Grazing Administration, Exclusive of Alaska., Subpart 4120.3

The proposal to implement a vegetation treatment on salt cedar is consistent with the New Mexico Record of Decision dated July 1991, for the *Vegetation Treatment on BLM Lands in Thirteen States*, Final Environmental Impact Statement of May 1991.

II. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action

The proposed action is to mechanically remove salt cedar growing either singly or in clumps on public and private land within a 100-acre project area encompassing a playa and associated drainage on the Blackwell Allotment 64058 (see map). Access to the area would be via Highway 380, Red Bridge Road and Zinnia Road which dead ends at the allotment. The Komatsu would be off-loaded from the transport at the dead end turnaround and walked to the site requiring clearing. Salt cedar removal would occur between October and December. It is expected that four to five days would be required to clear the majority of salt cedar from the project area.

A 23-ton Komatsu excavator with a special bucket (patent applied for) would be used to extract the plants from the soil with as much root mass intact as possible and without much soil attached to the root system. The tread width of each track is about 31 inches exerting about 5 pounds per square inch to the ground surface. The overall width of the crawler is about ten feet. Gradual turns would be made with both tracks versus braking one side as with bulldozing which churns up the soil surface. Associated equipment includes fuel trailer, personal vehicle for operator, and transport.

The special bucket is an open-ended backhoe bucket with a v-notch and hydraulic “thumbs” on a boom with a 30-foot reach. Typically, a side grab of the plant is made with the bucket in order to grasp the bulk of the plant at the point where most stems are closest together above ground. The plant is then extricated with an upward motion with most large roots intact and without disturbing much soil as with digging the plant out with a bulldozer. On other plants, the bucket is dropped directly in the middle of the plant and extricated. Some very large plants may require additional pulling. This method allows the root “bulb” to be extracted in one piece and much of the root system is intact. A swing is made with the extracted plant piled or windrowed to one side of the excavator. In “doghair” stands (many little salt cedar plants), the area is grubbed with the open-ended bucket. Plants are uprooted and most of the soil passes through the bucket and falls back in place.

It is expected that only one pass would be required through a treatment area with extricated salt cedar either piled or windrowed on one side of the pass line. More passes would be required in more dense areas, but usually not over the same pass line. Movement to individual trees would be planned to minimize travel distance and surface disturbance by the tracked excavator.

Individual salt cedar trees found outside of the main densities (greater than 50 yards) would be hand cut with chainsaws and stump-treated with an approved herbicide (e.g., ARSENAL). It is more economical and less impacting to hand cut outlying trees while utilizing the excavator for more dense salt cedar stands. Follow-up control of potential resprouts would be conducted during the next growing season, if needed. Re-sprouts would be treated with a backpack sprayer or all terrain vehicle-mounted sprayer. Along these lines, subsequent treatment with an approved herbicide may be needed within the

general project area. Mechanical application of an approved herbicide using backpack sprayers, or atv-mounted sprayer would be conducted either by the BLM or under contract.

Salt cedar piles and windrows would be kept relatively small for future burning with low fire intensity, and to allow for accessibility by BLM fire personnel (engines, hose lays, etc.) during the burning operation. Some pushing of extricated salt cedar with heavy equipment (e.g., front end loader) into piles may be required, depending on the density of salt cedar and needs of BLM hazardous fuels reduction specialist to conduct a clean burn.

At a later date, as early as one or two years after mechanical treatment, piles and windrows would be burned to remove dead vegetation. The BLM may opt to conduct a large scale prescribed fire within the grassland community to include the project area. The approximate acreage of a proposed large burn would be about 400 acres of public land with some private land included. The burns would be conducted between February 1 to April 15. The purpose for this time frame include; (1) the availability of firing and holding resources, (2) relatively low fire activity period, and (3) seasonal weather conditions that would be favorable to achieve the desired objectives.

The specifics of the prescribed fire for both brush pile removal and large scale grassland treatment would be outlined in the necessary Burn Plan. The goal of the project is to eliminate salt cedar for the long term within the project area and improve the density of native grasses within the subwatershed of the playa.

Coordination with the active grazing permittee prior to salt cedar clearing and burning would include provisions to remove livestock from the area, if needed.

B. Alternatives

No Action - This alternative would leave salt cedar as it is now.

C. Alternatives Considered but Not Analyzed

The alternative of grubbing salt cedar with a bulldozer was considered but not further analyzed. The physical disturbance of mechanical control with bulldozers over 100 acres would be more damaging to resources. This alternative will not be given further consideration in this report; fewer environmental impacts would result from the action as proposed.

III. AFFECTED ENVIRONMENT

A. General Setting

The proposed project is located adjacent to the Middle Tract of the U.S. Fish and Wildlife Service Bitter Lake National Wildlife Refuge (BLNWR). The project site is part of a proposed administrative-designation area for the protection of surface and groundwater resources supplying springs and sinkholes at the BLNWR that provide crucial yearlong habitat for several threatened and endangered species (see map). Specifically, spring and sinkhole habitats in the northern portion of the Refuge's Middle Tract.

The climate of the area is generally classified as semi-arid with an average growing season of 195 days (April to October). During the growing season, the daily temperatures average from 55 to 80 degrees Fahrenheit (F). There are frequent highs of 100 degrees F. or more during the summer. Minimum winter temperatures occasionally drop below 0 degrees F. The average annual temperature is 61 degrees F. High winds from the west and southwest are common from March to June.

Annual precipitation averages 8 to 12 inches a year. Wide fluctuations from year to year are common, ranging from a low of about two inches to a high of over twenty inches. Eighty percent of the annual precipitation occurs in the form of rainfall during the months of June through September. Snowfall averages less than four inches annually and may occur from November through April, and usually melts within a short time.

B. Affected Resources

The following resources or values are not present or would not be affected: Prime/Unique Farmland, ACEC's, Minority/Low Income Populations, Wild and Scenic Rivers, Hazardous/Solid Wastes, Wetlands/Riparian Zones, Floodplains, Native American Religious Concerns. Cultural inventory surveys would continue to be required for federal actions involving surface disturbing activities. The impact of the proposed action and alternatives to minority or low-income populations or communities has been considered and no significant impact is anticipated. A cultural clearance was completed for the project on _____, no artifacts or other cultural sites were found.

1. Range: Allotment 64058 is authorized for grazing by four horses on public lands located in one large pasture. The latest grazing permit was for 48 AUs in active use. Actual livestock numbers on the allotment may be less than the active use depending on vegetative and economic conditions. No livestock are on the allotment at this time.

2. Vegetation: This allotment is primarily within the grassland vegetative community as identified in the Roswell Resource Management Plan/Environmental Impact Statement (RMP/EIS). Vegetative communities managed by the Roswell Field Office are identified and explained in the RMP/EIS. Appendix 11 of the draft RMP/EIS describes the Desired Plant Community (DPC) concept and identifies the components of

each community.

The dominant ecological (range) sites on the allotment is Loamy SD-3. Range site descriptions are available for review at the Roswell BLM office or any Natural Resources Conservation Service office. Plant species present include alkali sacaton, gyp dropseed, tobosa, black grama, blue grama, gyp grama, gyp muhly, gyp dropseed, threeawn, tobosa, sand dropseed, fluffgrass, saltgrass, witchgrass, false holly, silver nightshade, coldenia, pickleweed, buckwheat, perennial forbs, fourwing saltbush, broom snakeweed, mesquite and javelinabush. Saltcedar are found in bands along low-lying drainages and playa.

Noxious Weeds - There are no known populations of invasive or noxious weed species on the proposed Habitat Protection Zone. However, salt cedar is listed by the State of New Mexico as a Class C weed. BLM's policy is to limit the spread of such species as much as possible.

Infestations of noxious weeds can have a disastrous impact on biodiversity and natural ecosystems. Noxious weeds affect native plant species by out-competing native vegetation for light, water and soil nutrients. Noxious weeds cause estimated losses to producers \$2 to \$3 billion annually. These losses are attributed to: (1) Decreased quality of agricultural products due to high levels of competition from noxious weeds; (2) decreased quantity of agricultural products due to noxious weed infestations; and (3) costs to control and/or prevent the noxious weeds.

Further, noxious weeds can negatively affect livestock and dairy producers by making forage either unpalatable or toxic to livestock, thus decreasing livestock productivity and potentially increasing producers' feed costs and animal health care costs. Increased costs to operators are eventually borne by consumers.

Noxious weeds also affect recreational uses, and reduces realty values of both the directly influenced properties and adjacent properties.

Recent federal legislation has been enacted requiring state and county agencies to implement noxious weed control programs. Monies would be made available for these activities from the federal government, generated from the federal tax base. Therefore, all citizens and tax payers of the United States are directly affected when noxious weed control prevention is not exercised.

3. Soils: In general, the soils in the area are Holloman series. The soils are deep, well drained, and found on nearly level to moderately sloping areas. The soils are derived predominately from gypsum and caliche. For in depth soil information, please refer to the Soil Survey of Chaves County New Mexico, Southern Part, published by the Natural Resource Conservation Service (NRCS). A copy of this publication may be reviewed at the BLM Roswell Field Office or at a local NRCS office.

4. Cave/Karst: The habitat protection zone is within a designated area of high potential for the occurrence of caves and karst. Karst terrain may consist of numerous sinkholes, disappearing streams and underground drainage systems. In karst areas, erosional processes, which would normally act on the surface, are concentrated below ground. Although a complete inventory of significant cave and karst features has not been completed for BLM lands, significant cave and karst features are known to exist within the HPZ.

5. Water Quality: Ground water flow in much of the area of analysis converges on the Middle Tract of the refuge, which has caused concern about the risks of ground water contamination from various sources. As a result, the U.S. Fish and Wildlife Service contracted a study of the source and movement of water supplying the refuge (Balleau Groundwater, Inc. 1999). The report provides much of the basis for delineating the HPZ area.

A small playa is located in the center of the allotment and is currently dry, due in part to the high density of salt cedar that has invaded the site. Ground water near the allotment generally moves to the southeast, and eventually reemerges as flow in the river. The water table ranges from 25 to 100 feet below the surface as classified by the New Mexico Water Quality Control Commission.

6. Air Quality: Air quality is rated as a Class II area for the Prevention of Significant Deterioration of air quality as defined in the federal Clean Air Act. Class II areas allow a moderate amount of air quality degradation within the standards of the State of New Mexico and the Federal Air Standards. Prevailing winds in the area is out of the southwest throughout the year. There are no communities within 50 miles of the direction the prevailing winds carry, therefore, all smoke and dust would be dissipated before reaching any communities.

7. Wildlife: The allotment provides a variety of habitat types for terrestrial and aquatic wildlife species. The diversity and abundance of wildlife species in the area is due to the presence of open water at the adjacent BLNWR and mixture of grassland habitat and mixed desert shrub vegetation.

Numerous avian species use the Pecos River corridor during spring and fall migration, including nongame migratory birds. The Bitter Lake National Wildlife Refuge is directly east from the allotment, and serves as a major focal point for migratory birds (e.g., ducks, geese, sandhill cranes, waterbirds). Common bird species are mourning dove, mockingbird, white-crowned sparrow, black-throated sparrow, blue grosbeak, northern oriole, western meadowlark, Crissal thrasher, western kingbird, northern flicker, common nighthawk, loggerhead shrike, and roadrunner. Raptors include northern harrier, Swainson's hawk, American kestrel, and occasionally golden eagle and ferruginous hawk.

Common mammal species using the area include mule deer, pronghorn antelope, coyote, gray fox, bobcat, striped skunk, porcupine, racoon, badger, jackrabbit, cottontail, white-footed mouse, deer mouse, grasshopper mouse, kangaroo rat, spotted ground squirrel, and woodrat.

A variety of herptiles also occur in the area such as yellow mud turtle, box turtle, eastern fence lizard, side-blotched lizard, horned lizard, whiptail, hognose snake, coachwhip, gopher snake, rattlesnake, and spadefoot toad.

8. Threatened or Endangered Species: There are no known resident populations of threatened or endangered species in the proposed project area. The main habitat concern for this proposed project is the protection and enhancement of the subsurface aquifers and groundwater supplying springs and sinkholes occupied by the Pecos gambusia on the BLNWR. Federally proposed species include four macroinvertebrates; Pecos assiminea snail, Roswell spring snail, Koster's tryonia snail, and Noel's amphipod (freshwater shrimp). The status and presence of these species in the RFO area are discussed in the following section.

Pecos Gambusia (*Gambusia nobilis*) - Federal Endangered

The Pecos gambusia is endemic to the Pecos River Basin in southeastern New Mexico and western Texas. Historically, the species occurred as far north as the Pecos River near Fort Sumner, and south to Fort Stockton, Texas.

Recent records indicate, however, that its native range is restricted to sinkholes and springs and their outflows on the west side of the Pecos River in Chaves County. In spite of population declines, the species remains locally common in a few areas of suitable habitat. Populations on the BLNWR and the Salt Creek Wilderness Area constitute the key habitat of the species in the RFO area. On the refuge, the gambusia is primarily restricted to springs and sinkholes in the Lake St. Francis Research Natural Area.

Pecos (Puzzle) Sunflower (*Helianthus paradoxus*) - Federal Threatened

The Pecos sunflower is found along alkaline seeps and cienegas of semi-desert grasslands and short-grass plains (4,000-7,500 ft.). Plant populations are found both in water and where the water table is near the ground surface.

In the RFO area, the sunflower is found in only a few areas outside of the BLNWR. In 1994, a new population was found growing on the margins of Lea Lake and its outflow at Bottomless Lakes State Park. Lloyd's Draw, east of the Pecos River, has the only known Pecos sunflower population on BLM land, which only became evident following a prescribed fire. Potential habitat also occurs on BLM land within the Overflow Wetlands Wildlife Habitat Area.

Potential habitat for the sunflower occurs on the allotment as low lying areas where the water table is near the ground surface. The low lying areas are not necessarily along the existing river channel, but in old channel courses and oxbows. These areas are now invaded by saltcedar growing in dense stands, which may prevent the viability of the Pecos sunflower. Other potential sites include a few springs on the east side of the river. No Pecos sunflower populations have been found on the allotment to date.

Pecos Assiminea Snail (*Assiminea pecosensis*) Proposed Endangered with Critical Habitat
Roswell Springsnail (*Pyrgulopsis roswellensis*) Proposed Endangered with Critical Habitat
Koster's Tryonia Snail (*Tryonia kosteri*) Proposed Endangered with Critical Habitat
Noel's Amphipod (*Gammarus desparatus*) Proposed Endangered with Critical Habitat

These three snails and one amphipod are found in the same locations and share the same threats and management needs. All have extremely limited distribution in the Roswell FO area. Significant populations of these species occur at sinkholes, springs and associated spring runs and wetland habitat at the Bitter Lake National Wildlife Refuge. The Roswell springsnail and Koster's tryonia (*Hydrobiid* snails) are known only from Bitter Creek, Lost River and Sago spring system at the refuge, and North Springs at the Roswell Country Club (private land, status uncertain). The Pecos assiminea (marine snail family) is known only from the refuge and Diamond Y Spring near Ft. Stockton, Texas. Noel's amphipod is known only from the refuge. If listed as endangered, BLNWR would be considered critical habitat for these species.

9. Visual Resources/Recreation: The allotment is located within a Class IV Visual Resource Management area. This means that contrasts may attract attention and be a dominant feature in the landscape in terms of scale. However, the changes should repeat the basic elements of the landscape. Since this allotment has no facility-based recreational activities, only dispersed recreational opportunities occur on these lands. Recreational activities that occur include hunting, sightseeing, and hiking. Physical access to public lands located on this allotment are through private lands. Off Highway Vehicle designation for public lands within this allotment are classified as "Limited" to existing roads and trails.

IV. ENVIRONMENTAL IMPACTS

A. Impacts of the Proposed Action

1. Range: There would be minimal impact to livestock operations on the Blackwell 64058 grazing allotment due to the brief period of time salt cedar eradication would be taking place and kind and number of livestock run on the allotment (four horses).

2. Vegetation: Vegetation treatments would have beneficial and adverse effects on terrestrial vegetation within the project area. Densities of salt cedar would be significantly lowered in the playa and associated drainage through the grassland community. Non-target vegetation, primarily grasses, would be crushed by the excavator while traversing the area and individual plants uprooted in the immediate site of salt cedar extrication. Vegetation would be crushed by piled and windrowed salt cedar. Most of these impacts would be mitigated by the time of year that the project would be conducted, at the end of the growing season.

By reducing the salt cedar component, herbaceous species would gain in densities after adequate precipitation occurs. Herbaceous species tend to have abundant seed which germinate and mature more rapidly than woody species or succulents. Disturbed sites would revegetate quickly.

All vegetation would be temporarily negatively impacted after burning. The herbaceous species would respond within one growing season, and with adequate precipitation, to a level exceeding pre-burning levels. During the burn operation, surrounding vegetation would be consumed by fire, but would quickly recover except in a few areas that may burn hot and sterilize the soil. Forbs would likely dominate these sites first, and after a few growing seasons, grass over as well.

The change in composition of the vegetative community would have the effect of changing the area of treatment from a salt cedar-infested grassland habitat to a more open play within a grassland habitat type in a relatively short period of time (approximately two to three years).

Noxious Weeds - The movement of equipment to and from the site may unintentionally contribute to the establishment and spread of noxious weeds. Noxious weed seeds could be carried onto the project areas by equipment and transport vehicles. The main mechanism for seed dispersion is by equipment and vehicles that were previously used and or driven across or through noxious weed-infested areas. The potential for the dissemination of invasive and noxious weed seeds may be elevated by the use of equipment typically contracted out to different geographic areas in the region. Washing and decontaminating the equipment prior to transporting the equipment onto the construction areas would minimize this impact.

Impacts by noxious weeds will be minimized due to requirements for the company to eradicate the weeds upon discovery. Multiple applications may be required to effectively control the identified populations.

3. Soils: Short term negative impacts to the soil are anticipated from the mechanical clearing of salt cedar by the excavator. Soil along the traveled route of the excavator would be compacted to a degree due to the weight of the machinery. Five pounds per square inch is the exerted pressure by the treads. This is a relatively light “footprint”. Weight is spread over a large area versus the contact patch of a tire. In addition, the cleats are shallow and do not penetrate the surface as deep.

Soils should stabilize after vegetation once again regenerates in the disturbed areas. Short term negative impacts from burning will occur until re-growth stabilizes the soils, especially under salt cedar piles and windrows that burn hot, sterilizing the soil. Burns would be designed to not burn hot and during a time of day and year when burning conditions are favorable for cool burns. Long term positive impacts are expected to benefit the soil from an increased herbaceous vegetation cover. The increased organic material from salt cedar needles, stems and roots, subsequent ash from burning, and by the increased production of grasses and forbs would improve the fertility of the soils. This increase in organic material will also help prevent the erosion hazard of soil blowing. Increased cover is expected to also increase water infiltration rates and moisture holding ability.

4. Cave/Karst: The proposed action would not affect cave/karst resources.

5. Water Quality: Short term impacts may occur after a relatively heavy precipitation event that produces sheet flow, and seen as water collecting within the playa. Loose soil and ash may be suspended in the flow and deposited in the playa. Some soil erosion could occur if sheet flow is high in the drainage that supplies the playa. After vegetation has re-established, surface water quantity and quality should increase due to the eradication of salt cedar and better protection of the soil by herbaceous vegetation cover. No negative impact on water quality is expected.

Ground Water: Because of the relatively small size of the treatment area and surface drainage patterns, the ground water should not be affected by herbicide application. No impact on water quality is expected and the low concentration of hand applied herbicide.

6. Air Quality: During the extrication process, some dust and soil may be carried by wind but is not expected to impact air quality. Air quality will suffer short term decreases on burn days and for a few days following burning. No long-term impacts due to smoke accumulation are anticipated. The smoke dispersal area is unpopulated rangeland and smoke will disperse rapidly with the wind.

7. Wildlife: Removal of salt cedar from the grassland community would also remove the vertical structure of vegetation currently found in the grassland habitat. This would likely affect bird species seeking cover and perches while traversing through the area either yearlong or seasonally. More open grasslands is likely to be favorable to certain animal species and unfavorable to others. The change in vertical structural diversity may have an effect on mostly avian wildlife populations.

Mechanical treatment would have a temporary effect on all wildlife species in the area due to noise and physical removal of vegetation. Negative impacts would be lessened since the period of treatment avoids the bird nesting season and other critical seasons when loss of cover would be critical to wildlife; for example, during critical reproductive periods (from April to June).

Impact to wildlife would naturally be short term following the prescribed burn. As with any fire, whether natural or man caused, some mortality of small animals, reptiles and birds would occur, especially if they seek salt cedar piles as cover. In most cases, wildlife would be displaced in the short term by the fire and the loss of surrounding vegetation and then would return when vegetation begins to grow back. Some piles would be left as habitat to mitigate the loss of vertical structure which adds to habitat diversity.

After treatment of salt cedar, the increase of forb and grass species would most likely lead to an increase in use of the treated areas by wildlife species that prefer a grassland type, such as mule deer and pronghorn antelope, and certain avian species.

8. Threatened and Endangered Species: There would be no direct effect to listed and proposed species or their habitat as they do not occur within the proposed project area. An indirect and long term effect may be an increase of groundwater availability to the refuge via the Lost Creek drainage. This would be an immeasurable result but possible

nonetheless as the reduction of salt cedar and improvement of range condition would improve the subwatershed condition above the BLNWR. Because of the potential beneficial impact to T/E species, a determination of May Affect But Not Likely To Adversely Affect is made for all listed species.

9. Visual Resources/Recreation: Salt cedar is a non-native species that has invaded many plant communities in the west to a point where it is part of the landscape, although unnatural when considering that it has invaded grassland habitat and riparian habitat to the exclusion of native plant communities. Removing the vertical structure of salt cedar would not change the color and texture of the original, natural character of the landscape. In the long term (in excess of one year following each treatment) increased lush plant growth and diversity would tend to change the visual character of the area in a positive manner. In addition, there would be no impact to recreation uses in the area by the removal of salt cedar.

B. Impacts of the Alternatives

1. No Action - This alternative would not significantly change the present conditions. The area would primarily remain in a status quo condition with the Lost Creek drainage dominated by salt cedar. Salt cedar would increase in density within the grassland community. Wildlife populations would remain unchanged under this alternative. No increase of forage, stabilization of the soils, or increase in water infiltration would occur.

C. Mitigation Measures and Residual Impacts

Impacts to the following resources and values would not be mitigated under any alternative and are considered to be residual impacts:

- Short-term change in chemical composition of the uppermost soils layers due to the change in abundance of organic matter.
- Long-term change in percentage of already occurring wildlife species.
- Long-term change in vegetative composition within the treated area.
- The RFO Wildlife Biologist has determined that the amount of land left untreated in the vicinity of the project will adequately serve the needs of the short-term disruption in the wildlife use of the area.

No additional mitigating measures would be needed if the standard operating procedures and design features previously discussed are adhered to. No additional mitigating measures would be needed as long as the prescribed burns stay within the parameters set forth in the Proposed Action and Burn Plan.

D. Cumulative Impacts

Any cumulative impact of the proposed treatment of target vegetation on wildlife would be dissipated by the condition of the surrounding treated areas outside of the proposed project area. Wildlife would be utilizing the different areas at varying levels of use for feeding, protection, cover and reproduction.

V. PERSONS OR AGENCIES CONSULTED

The following are people who have been consulted for their comments in regards to the proposed action. The comments and suggestions expressed during the consultation have been incorporated into this EA.

Helen Miller, Rangeland Management Specialist
Roswell Field Office, BLM

Pat Flannery, Archaeologist
Roswell Field Office, BLM

Michael McGee, Hydrologist
Roswell Field Office, BLM

Allan Wyngaert, Fuels Management
Roswell Field Office, BLM

Rick Evans & Pete Thompson, Boss Reclamation
Ruidoso, NM

Bill Blackwell, Permittee
Roswell, NM

